



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

NOV 13 1995

Mr. Phillip J. Shepherd, Secretary
Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Capital Plaza Tower, 5th Floor
Frankfort, KY 40601

Dear Mr. Shepherd:

The Environmental Protection Agency is in the process of reviewing the adopted revisions to Kentucky's water quality standards regulations which were submitted by your letter to me dated August 11, 1995. These revisions were adopted as a new regulation, 401 KAR 5:030, Nondegradation policy implementation methodology, on July 12, 1995.

Before we can complete our review, in accordance with Section 303 (c) of the Clean Water Act and 40 CFR Part 131, we are requesting additional written clarification concerning the implementation of certain aspects of these revisions to the Commonwealth's water quality standards. After you and your staff have reviewed the enclosed comments and questions, please contact me or Mr. Robert F. McGhee, Director, Water Management Division, at (404)-347-4450, if you require any additional information. Thank you for your continued cooperation.

Sincerely,

John H. Hankinson, Jr.
for John H. Hankinson, Jr.
Regional Administrator

Enclosure

401 KAR 5:030. Nondegradation policy implementation methodology

General Comments

Subsection 5(a)1 of Section 1 of the implementing regulation provides KPDES permit limits for new unpermitted or expanded domestic point source discharges into waterbodies whose quality exceeds that necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water. Effluent limitations are specified in the implementing regulation for carbonaceous biochemical oxygen demand (CBOD), ammonia-nitrogen, total residual chlorine (TRC), total suspended solids (TSS), total phosphorus (TP), dissolved oxygen (DO), chronic or acute whole effluent toxicity (WET) and fecal coliform for domestic discharges. Under what circumstances would the limits listed for these substances be more stringent? Also, please describe the opportunity for public input into this process.

It is our understanding that through the implementation of subsection 5(a)(6) of Section 1 of the implementing regulation that all other non-domestic discharges shall contain limits that are twice as stringent as those limits that would be required to meet applicable water quality criteria. For example, where a new unpermitted or expanded non-domestic discharge to a use protected stream would contain effluent limitations of no more than 20 mg/l five (5) day CBOD, 2 mg/l ammonia-nitrogen, 0.010 mg/l TRC, 10 mg/l TSS, and 1 mg/l TP a new unpermitted or expanded non-domestic discharge to a Tier II water would contain effluent limitations of 10 mg/l five (5) day CBOD, 1 mg/l ammonia-nitrogen, 0.005 mg/l TRC, 5 mg/l TSS, and 0.5 mg/l TP. Please provide us with your interpretation of this provision in writing if you find that all or a portion of the above interpretation is incorrect. Also, when a lowering of water quality will occur in a Tier II water, please describe the process for determining important economic and social development.

~~401 KAR 5:030 does not appear to include implementation provisions to address nonpoint sources (NPS) of pollution.~~
However, the policy statement in 401 KAR 5:029 Section 2 (2) assures "that nonpoint sources of pollutants be controlled by application of all cost effective and reasonable best management practices (BMPs)," consistent with the federal antidegradation policy, 40 CFR § 131.12(a)(2). Our understanding is that the implementation of BMPs to control NPS pollution as specified in 401 KAR 5:029 occurs based on other authorities within the Commonwealth and is therefore not governed by 401 KAR 5:030, even though Section 1 of 401 KAR 5:030 states that "the following procedures shall govern implementation of the nondegradation policy of 401 KAR 5:029, Section 2." Please provide a description of the implementing authorities for NPS pollution in waters of the Commonwealth and any other supporting information.

We understand that the estimated percent of surface waters of the Commonwealth designated as Tier II waters (waterbodies whose quality exceeds that necessary to support propagation of fish, shellfish, wildlife and recreation in and on the water) is about three percent. We understand that the remaining surface waters of the Commonwealth are afforded Tier I (Use Protected) classification and protection unless significant data [as specified in 401 KAR 5:030, Section 1 (3)] demonstrates that the waterbody is high quality. We also understand that waterbodies can be classified as high quality based on Index of Biotic Integrity (IBI) data collected by either Kentucky Department of Environmental Protection (DEP) staff or IBI data collected by a permittee or other interested party, provided that the data is reviewed by DEP as part of the recategorization process outlined in 401 KAR 5:030, Section 2. Through this recategorization process, the overall quality of the stream segment or waterbody under consideration is characterized as either Tier III, II or I. Based on our understanding of this process, the Commonwealth has chosen to implement antidegradation through a designational or "classificational" approach rather than the "parameter by parameter" approach. Please provide the rationale used to select that approach as being better suited for protection of Kentucky waters. Further, it is our understanding that the Cabinet still possesses the authority to implement Tier I antidegradation procedures for water withdrawals and other activities in regard to protection of existing uses, although these procedures are not specified under 401 KAR 5:030.

In order for us to better understand this process, we also ask that the Commonwealth provide a description of the classification/recategorization process for a potential Tier II waterbody with an existing discharge, where neither DEP nor the permittee has the time or resources to collect/conduct the necessary IBI data/survey apparently needed to classify this waterbody as high quality. Does the waterbody remain classified ~~as Tier I (use protected) until additional resources or survey crews become available?~~

8 In the April 15, 1995 Regulatory Impact Analysis for 401 KAR 5:026, Designation of uses and classification of surface waters, the Commonwealth stated "The Division of Water will perform field assessments of waters with high quality potential and will determine all classifications based on its assessments or on petitions submitted by the public." EPA's interpretation of this statement is that before the issuance of any new or expanded discharge permit, the Commonwealth will determine the appropriate antidegradation category (Tier I, II or III) for each waterbody that is not presently listed in Section 3 of this regulation. Further, it is our understanding that the Commonwealth can still deny any permit to waters of the State. ~~Is this interpretation correct? If this interpretation is incorrect, please provide~~ information showing the method that the Commonwealth will use to prevent degradation in uncategorized waterbodies.

Section 1

Page 2, subsection (5)

The implementing regulation for nondegradation allows permitting of domestic point sources (except stormwater point source discharges) if the limits specified in (5)(a)(1) for domestic dischargers are met. The federal policy requires completion of a Tier II decision process for the lowering of water quality, unless it is determined by the State (the Commonwealth) that the resulting degradation is insignificant. In order to be consistent with this part of the federal policy, when a potentially new or expanded domestic point source discharge to Tier II waters of the State is considered, we assume that the Commonwealth has determined that the resulting degradation due to the 10/5/1 limits will be insignificant. Has the Commonwealth projected discharge scenarios to confirm the level of degradation under these effluent limits? Please provide a written description of this procedure or an example of its use to assist in our review.

Page 2, subsection(5)(a)3

The implementing regulation exempts stormwater discharges from antidegradation implementation procedures for waterbodies whose quality exceeds that necessary to support the propagation of fish, shellfish, wildlife, and recreation in and on the water (Tier II waters). We understand that these discharges to Tier II waters are either controlled through the issuance of individual Phase I stormwater permits, or that the Commonwealth determines that the degradation resulting from an individual stormwater discharge or series of stormwater discharges to Tier II waters is considered as insignificant degradation. Further, we understand that the Commonwealth does not presently issue general permits for stormwater discharges into Tier II waters. Please provide a ~~written description of how the Commonwealth determines what~~ constitutes insignificant degradation to Tier II waters due to a stormwater discharge or discharges or an example of this process to assist in our review. To what degree was the Commonwealth's approach in using the 7Q10 flow as the design instream flow for stormwater discharges used as a basis for this decision?

Page 2, subsection (5)(a)5

Sixteen carcinogenic pollutants have both human health and aquatic life based criteria in the Commonwealth's regulations. For example, toxaphene has a human health criterion for water and organism consumption of 0.00073 µg/l and a chronic aquatic life criterion of 0.0002 µg/l. We interpret this provision to apply only to the 0.00073 µg/l human health criterion, and that the aquatic life criterion of 0.0002 µg/l is controlled by subsection (5)(a)6 which when applied allows one-half of the use protected

limit or $0.0002/2 = 0.0001$ $\mu\text{g/l}$ toxaphene (assuming no dilution or zero flow). Since the aquatic life criterion is more stringent than the human health criterion, the toxaphene limit for a permit issued to a discharger in Tier II waters would be based on the aquatic life criterion and its antidegradation provision. Does this example illustrate how the Commonwealth will implement antidegradation for these pollutants? If this example is not accurate, please explain the procedure used by the Commonwealth for implementation.

Page 2, subsection (5)(a)6

The phrase "all other waste discharges" is considered to mean any parameter in either a domestic or non-domestic permit not specifically addressed in subsections 1 through 5. Please confirm that this interpretation is correct.

Page 3, subsection (5)(b)2

The implementing regulation for nondegradation allows exceptions to (5)(a) limits for discharges based on the results of alternative treatment/relocation and pollution prevention analysis to reduce or eliminate the need for limits as specified in (5)(a). The federal policy [40 CFR § 131.12(a)(2)] allows lowering of water quality to accommodate important economic or social development in the area in which the Tier II receiving waters are located. When the degradation from a domestic discharge to a Tier II water is not necessary for important social and economic development, as specified in 40 CFR § 131.12(a)(2) and 401 KAR 5:029, Section 2, can the Commonwealth deny the application for the discharge and prohibit degradation? If not, please provide an explanation as to why the Commonwealth considers such a discharge to be consistent with the federal antidegradation policy.

Section 2

Page 4, subsection (3)

Our understanding is that waters of the Commonwealth that are designated in the future as Kentucky Wild Rivers are automatically included in the Commonwealth's list of Tier II waters specified in 401 KAR 5:026. Our understanding is that these waters are subjected to public review as part of the triennial review process. Further we understand that waters of the Commonwealth that are added to or included in the Reference Reach Network can also be designated as Tier II waters, but that a petition for nomination of these waters must be submitted to the Cabinet or the Cabinet must nominate these waters as specified in 401 KAR 5:030, Section 2. Please specify the method or procedure for establishing effluent limits for proposed discharges to these waters between the time of designation as Kentucky Wild Rivers or the time included in the Reference Reach Network.

Section 3.

Page 5, subsection (2)

We understand that when it is determined by the Commonwealth that threatened or endangered species exist in a water of the Commonwealth, that the water is designated as an Outstanding Resource Water, but not necessarily designated as a Tier II water. Thus, the list of Tier II waters in 401 KAR 5:030 is a subset of the list in 401 KAR 5:026. Please provide any additional written clarification on this issue, if necessary.
